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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA,

SAN FRANCISCO DIVISION

SONOS, INC.,	Case No. 3:20-cv-06754-WHA
Plaintiff and Counter-Defendant,	Consolidated with Case No. 3:21-cv-07559-WHA
v.	**SONOS, INC.'S TRIAL BRIEF REGARDING INFRINGMENT OF THE '966 PATENT**
GOOGLE LLC,	
Defendant and Counter-Claimant.	Judge: Hon. William Alsup Courtroom: 12, 19th Floor Trial Date: May 8, 2023

1   The Court has asked whether the apparatus claims of Sonos's asserted U.S. Patent No.

2   10,469,966 (the "'966 patent") can be infringed by a "smartphone with the Home app

3   downloaded" or whether the claims require that the smartphone be "connected or used with any

4   speakers." Tr. Tran. 1031:2-6.

5   The answer is that infringement requires *only* a controller device (*e.g.*, a smartphone) with

6   the Google Home application installed. Such a device infringes at the time it is made, used,

7   offered for sale or sold and regardless of whether or not it is connected to or used with speakers.

8   The *reason* this is true is because the asserted claims of the '966 patent recite a ***single***

9   computing device that contains program instructions that "when executed … cause the computing

10   device to perform" the after recited functions. This means, in turn, that the claim is directed to a

11   computing device with software that makes the device *capable* of performing the recited

12   functions. Thus, for example, a device, loaded with the recited software, that is in a box (and not

13   connected to or used with *anything*) infringes at the time it is sold.

14   Indeed, the Federal Circuit has confirmed that, when a claim is directed to a device that is

15   capable of interacting with other device, those other devices are not actually needed for

16   infringement to occur. *See INVT SPE LLC v. ITC*, 46 F.4th 1361, 1369 (Fed. Cir. 2022)

17   (confirming that claims directed to a single "communication apparatus" did not require the

18   infringer to make or use a "base station" that was "part of the environment in which the user

19   device must function").

20   **A.   The Asserted Claims of the '966 Patent Are Apparatus Claims Reciting A**
         Single Computing Device With Software that Provides Certain Capabilities.
21

22   In this trial, Sonos is asserting that Google infringes claims 1, 2, 4, 6 and 8 of the '966

23   patent. Claim 1 is an independent claim, and the other asserted claims all depend from claim 1.

24   Each of these claims is an apparatus claim directed to "a computing device." Specifically,

25   claim 1 reads as follows (emphasis and brackets added):

26   [1.0] A computing device comprising:

27   [1.1] one or more processors;

28   [1.2] a non-transitory computer-readable medium; and;

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[1.3] program instructions stored on the non-transitory computer-readable medium that, ***when executed*** by the one or more processors, cause the computing device to perform functions comprising:

[1.4] while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually:

[1.5] receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

[1.6] based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

[1.7] receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

[1.8] based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

[1.9] displaying a representation of the first zone scene and a representation of the second zone scene; and

[1.10] while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

[1.11] based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

As shown above, the computer device recited in claim 1 has three primary components.

First, it must have one or more processors. **Second**, it must have a non-transitory computer

1   readable medium. **Third**, that non-transitory computer readable medium must store program

2   instructions that, **when executed**, causes the computing device to perform the functions set forth

3   in the rest of the claim. This means that the computing device must have programing that allows

4   the device, when serving as a controller for a networked media playback system, to receive

5   requests, perform functions based on those requests, and display representations of zone scenes.

6   No other devices beyond this singular claimed computing device are required by the

7   claim.

8   The asserted dependent claims 2, 4, 6 and 8 do not recite any components beyond the

9   claimed computing device from claim 1. Instead, they specify that the program instructions

10   stored on the device must, when executed, provide for additional or more specific capabilities

11   beyond those recited in claim 1.

12   **B.   Sonos's Apparatus Claims Are Infringed By A Device Harboring Software
              Capable Of Performing The Claimed Functions.**
13

14   Because Sonos's asserted claims are each directed to an apparatus, they are infringed

15   whenever Google (or its customers) makes, uses, sells, offers to sell, or imports into the United

16   States an infringing apparatus. *See* 35 U.S.C. § 271(a). Thus, although Sonos's claimed

17   apparatuses must include program instructions that, when executed, perform certain

18   functionalities in connection with other devices, infringement still occurs at the time a claimed

19   apparatus is merely *made* or *imported,* regardless of whether the stored program has been or ever

20   will be conducted. *Silicon Graphics, Inc. v. ATI Techs., Inc.,* 607 F.3d 784, 794 (Fed. Cir. 2010)

21   (explaining that "an apparatus claim directed to a computer that is claimed in functional terms is

22   nonetheless infringed so long as the product is designed 'in such a way as to enable a user of that

23   [product] to utilize the function . . . without having to modify [the product]'") (citation omitted).

24   For this reason, the Federal Circuit has long held that, with regard to apparatus claims, "the

25   accused device, to be infringing, need only be capable of operating" according to the recited

26   functions, and that "actual [] operation of the accused device is not required." *Intel Corp. v. U.S.*

27   *Int'l Trade Comm'n*, 946 F.2d 821, 832 (Fed. Cir. 1991) (ruling that the limitation "program

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1   selection means for selecting [an] alternate address mode" was infringed by a device with that

2   capability).

3   In *Finjan, Inc. v. Secure Computing Corp.*, the Federal Circuit considered claims that

4   recited a "computer-readable storage medium storing program code for causing a server that

5   serves as a gateway to a client to perform the steps of: receiving . . . ; comparing . . . ; and

6   preventing execution . . . ." 626 F.3d 1197, 1205 (Fed. Cir. 2010). Put differently, the claimed

7   code needed to be "for causing," among other steps, the "receiving an incoming Downloadable

8   addressed to a client." That step (like the receiving step at issue in the claims here) could occur in

9   a system where another device *sent* the Downloadable. *See* Exhibit 1 (U.S. Patent No. 6,092,194)

10   at claim 65. The Federal Circuit nonetheless explained that these claim limitations "cover

11   capability" and that the "language does not require that the program code be 'active,' only that it

12   be written 'for causing' a server [] or a computer [] to perform certain steps." *Finjan*, 626 F.3d at

13   1205. The Federal Circuit therefore affirmed that the defendant infringed these storage medium

14   claims because it was "undisputed that software for performing the claimed functions existed in

15   the products *when sold*." *Id.* (emphasis added). "[T]o infringe a claim that recites capability and

16   not actual operation, an accused device 'need only be capable of operating' in the described

17   mode." *Id.* at 1204 (citing *Intel*, 946 F.2d at 832).

18   In *Tex. Advanced Optoelectronic Sols., Inc. v. Renesas Elecs. Am., Inc.*, the claims before

19   the Federal Circuit were directed to an "optical detector" with means "for determining an

20   indication of spectral content of the incident light." 895 F.3d 1304, 1327 (Fed. Cir. 2018). The

21   patentee argued that the accused products had a "Mode 3" in which they would conduct the

22   claimed function. The defendant, however, demonstrated that there was "no evidence of the

23   accused products operating in Mode 3." *Id.* Although the Federal Circuit found that this fact

24   doomed the method claims, the court explained that the apparatus claims "require only devices

25   that are *capable*" of performing the claimed functions. *Id.* (emphasis added). The court therefore

26   affirmed that the defendant infringed the apparatus claims because "although infringement of the

27   apparatus claims requires that [the defendant's] products have the ability to perform in Mode 3,

28   infringement does not require actual use of the [defendant's] products in Mode 3." *Id.*

1   Yet again, in *VirnetX Inc. v. Apple Inc.*, the Federal Circuit considered a claim that recited

2   "a computer readable medium storing a domain name server (DNS) module comprised of

3   computer readable instructions that, when executed, cause a data processing device to perform"

4   three particular steps in connection with DNS requests sent by a client. 792 F. App'x 796, 799

5   (Fed. Cir. 2019). The court explained that the limitation requiring that code perform certain steps

6   "when executed" required only that the code on the device be capable of performing the required

7   functions if and when the code was eventually executed. *Id.* at 808. Accordingly, the Court

8   explained that the patentee "was not required to prove that [the defendant] or its customers

9   actually executed" the claimed software, "just that [the defendant] sold devices with [the claimed

10 software] installed." *Id.*

11   Similarly, in *NetFuel, Inc. v. Cisco Sys. Inc.*, a court in this district ruled that claims

12 reciting a "[a] machine-readable storage medium that provides instructions which **when executed**

13 by a processor causes the processor to perform a method" required "only that the instructions be

14 capable of causing a method to be performed." 438 F. Supp. 3d 1031, 1035 (N.D. Cal. 2020)

15 (emphasis in original). *See also* Dkt. No. 309 at 9 (citing *NetFuel* and ruling that a similarly

16 phrased "when executed" claim was infringed where the "accused products are readily capable of

17 allowing users" to perform the claimed functionality). Again, because the claims here are

18 directed to a *capability*, a device infringes if it contains the software that would *allow* it to

19 perform the recited functions if someone attempted to use if for that purpose . . . and regardless of

20 whether those functions have been or are ever performed.[1]

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22 [1] To be clear, courts agree that an express recitation of the word "capable" is not required in order for such apparatus claims to be drawn to capability. *See, e.g.*, *Finjan*, 626 F.3d at 1204-05

23 (finding "claims describe capabilities" even though the words "capable" or "capability'" did not appear in claim language); *Microprocessor Enhancement Corp. v. Texas Instrum. Inc.*, 520 F.3d

24 1367, 1375 (Fed. Cir. 2008) (same, finding a claim reciting "[a] pipelined processor **for executing** instructions" was directed to a processor "capable of performing the recited functions."); *M2M*

25 *Sols. LLC v. Motorola Sols., Inc.*, No. 12-33-RGA, 2016 WL 70814, at *6 (D. Del. Jan. 6, 2016) (acknowledging that an apparatus claim need not expressly use the term "capability" or "capable"

26 in order to cover devices that are programmed with the capability for performing the recited functions); *Netscape Commc'ns Corp. v. ValueClick, Inc.*, 684 F. Supp. 2d 699, 704 (E.D. Va.

27 2010) (CRM and system claims reciting "executable program instructions" cover devices that are

28 "capable of executing the claimed method."); *MasterMine Software, Inc. v. Microsoft Corp.*, 874

1   This same issue came up with a Sonos patent concerning a speaker in *Sonos, Inc. v. D&M*

2   *Holdings, Inc.*, No. 14-1330-RGA, 2017 WL 3669514, at *1 (D. Del. Aug. 24, 2017). In that

3   case, the defendant attempted to argue that infringement of the speaker-directed apparatus claims

4   would not occur unless the device was "plugged in, connected to a data network, and otherwise

5   set up as described in the claims." *Id.* The court disagreed and found that a speaker alone would

6   infringe. Because "the accused products ship with firmware pre-installed that enables the end

7   user to utilize the functions described in the asserted claims . . . that is all that is necessary for the

8   sale or importation of the product to constitute infringement" *Id.* at *1-2. And the court

9   specifically rejected the position that the accused speaker alone was not "capable" of infringing

10   until it was set up and connected to with the app because, again, the "devices ship with firmware

11   pre-installed, such that the device is capable of meeting all limitations of the asserted claims

12   without modification." *Id.* at *2; *see also* Judge Bryson's Final Jury Instructions, *Sonos, Inc. v.*

13   *D&M Holdings Inc.*, Case No. 14-cv-1330 (D. Del. Dec. 15, 2017), Dkt. No. 524 at 5-7[2] (Judge

14   Bryson giving a curative instruction including an explanation of "capable of performing" because

15   infringer presented legally flawed argument throughout trial that the accused devices must be set

16   up and connected to one another to satisfy direct infringement).

17   And Google itself previously made and lost an argument on this exact issue before the

18   ITC. There, Google argued that its accused speakers did not infringe Sonos's apparatus claims

19   when imported because they were imported as "standalone devices" and the claims required them

20   to have the functionality to "enter[] into a synchrony group" with other speakers and controllers.

21   *Certain Audio Players and Controllers*, Inv. No. 337-TA-1191, Comm'n Op. at 17 (Feb. 1, 2022)

22   ("ITC Commission Opinion")[3]. The ITC, however, correctly rejected this argument as "legally

23   meritless." *Id* at 19. The Commission explained that the claims were in fact only directed to a

24   _____

25   F.3d 1307, 1315, 1316 (Fed. Cir. 2017) (finding "the claims merely use permissible functional
     language to describe the capabilities of the claimed system" where the claim was directed to "[a]

26   system comprising" and included a limitation reciting "a reporting module installed within the
     CRM software application . . . wherein the reporting module installed within the CRM software

27   application presents a set of user-selectable database fields").
     [2] *See* Exhibit 2.

28   [3] *See* Exhibit 3.

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1   single device, a first zone player, with "program instructions" that would perform certain

2   functions "when executed." *Id.* at 20. Accordingly, the ITC concluded that "the actual presence

3   of, and interaction with, a second zone player is not required for the first zone player to practice

4   these claims." *Id.* (citation omitted).

5   Sonos's asserted claims are indistinguishable from the capability claims in these cases.

6   As explained above, claim 1 recites a device containing program instructions that "when

7   executed," cause certain functions to be performed. This claim language is identical to the

8   language that the courts determined to recite an apparatus with programmed capabilities in

9   *VirnetX* and *NetFuel*. Thus, to infringe the asserted claims, Google (or its customers) only needs

10   to make, use, sell, or import a device that has the app installed and therefore is "capable of

11   operating" to perform the claimed program instruction steps. *Finjan,* 626 F.3d at 1205.

C.   The Functional Limitations Reciting Other Devices Do Not Make Those Devices Required For Infringement.

14   At trial, the Court suggested that the claims of the '966 patent may require more than a

15   single device with certain capabilities because the claims recite that "an indication must be

16   transmitted to the first zone player," suggesting that this can only occur if "the controller is

17   configured with the zone player." Tr. Tran. at 1031:7-11. Such a finding would contradict the

18   caselaw. As explained above, the caselaw concerning software-containing apparatus claims

19   makes clear that other devices are not required for infringement simply because those other

20   devices function in tandem with the program instructions on the claimed device.

21   For example, in *Finjan*, the claim required a gateway device that contained code that

22   would perform specific functions when the client received a Downloadable from *another device*,

23   but the court still found that the accused device itself infringed even if the software providing the

24   accused functionality had not even been "unlocked." 626 F.3d at 1205. Similarly, in *VirnetX,* the

25   claim recited software on a DNS server that specifically performed steps in connection with DNS

26   requests received from another device—a client. 792 F. App'x at 808. But the Federal Circuit

27   still found that the defendant infringed the claims when the defendant "sold devices with [the

28   accused app] installed." *Id.* And in *D&M Holdings Inc.*, the court accepted Sonos's position and

1   directly rejected the idea advanced by the infringer that a speaker claim did not infringe until

2   physically unboxed, set up, and networked with a controller, explaining that infringement

3   occurred simply because the speaker's firmware alone contained the functionality required by the

4   claims. 2017 WL 3669514, at *2; *see also* ITC Commission Opinion at 20 (rejecting Google's

5   arguments and ruling that other devices were not required for Sonos's apparatus claims to be

6   infringed.)

7   On this issue, the Federal Circuit's recent decision in *INVT SPE LLC v. ITC* is directly on

8   point. 46 F.4th at 1371. In that case, the court examined the question of whether functional

9   limitations in apparatus claims mentioning other devices require that those devices be present for

10 infringement and confirmed that they do not.

11   The apparatus claims in *INVT* recited a "communication apparatus" with various

12 components "that" perform certain steps in communicating with other devices. *Id.* In line with

13 its precedent, the Federal Circuit confirmed that these claims were "directed to capability—as in a

14 device that includes 'software components with specific purposes,' programmed to have the

15 ability to perform the operative steps." *Id.* at 1374 (citation omitted). And although the claims

16 required that the device have programming to perform steps in connection with another device—a

17 base station—the court explained that those limitations only indicated that the base station was

18 "part of 'the environment' in which the user device must function." *Id.* at 1375 (citation omitted).

19 But the Federal Circuit made clear that the claim itself was directed only to a user device *capable*

20 *of operating in conjunction* with a base station, and that the claim *did not actually require* a base

21 station. Specifically, the court explained that "the recited base station is not 'a limitation on the

22 claimed invention itself,' in the sense that an infringer *would not need to, for instance, use, make,*

23 *or sell the base station.*" *Id.* (emphasis added, citation omitted). Rather, the court explained that

24 "the base station's operation affects whether the claims are met." *Id.*[4]

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    [4] While the court in *INVT* was clear that the claims were directed to a communication apparatus
26 with certain capabilities on its own, the court found that there was a lack of proof of infringement
    because the plaintiff had failed to provide any evidence that *any of the accused devices* actually
27 had the **capabilities** required by the claims. *Id.* at 1375-80. Specifically, the court found that
    there was no "proof that an accused product—when put into operation—in fact executes all of the
28 claimed functions at least some of the time or at least once in the claim-required environment."

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The claims of the '966 patent work in the same way. Just as the claims in *INVT* were directed to a communications apparatus that was capable of operating in conjunction with a base station, the asserted claims here are directed to a computing device with particular software on it, and that software has to make the device capable of operating in conjunction with speakers. But just like in *INVT*, that does not mean that Google or its customers would "need to, for instance, use, make, or sell" the **speakers** for infringement to occur, just as the defendant in *INVT* was not required to make, use or sell a base station. *Id.* at 1375. Rather, because the asserted claims are directed to a *single* computing device containing program instructions that provide the recited *capabilities*, Google (and its customers) can infringe simply by selling, offering for sale, making or using such a computing device.

Dated: May 14, 2023

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Id. at 1377. This "was because of a failure to analyze source code governing the operation of the base station." *Id.* at 1369. That issue is not a concern here, as there is ample evidence in the record that Google's device has the claimed capabilities—including the *testing* performed by Sonos's expert. *See*, *e.g.*, Tr. Tran. 776:16-778:5, 799:23-801:20; Exhibit 4 (TX0441).

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